

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/766,560  
Source: IFWB  
Date Processed by STIC: 12-7-04

# ***ENTERED***



IFWO

## RAW SEQUENCE LISTING

DATE: 12/07/2004

PATENT APPLICATION: US/10/766,560

TIME: 16:13:17

Input Set : A:\PTO.FG.txt

Output Set: N:\CRF4\12072004\J766560.raw

3 <110> APPLICANT: Pizza, Mariagrazia  
 4 Bartoloni, Antonella  
 6 <120> TITLE OF INVENTION: IMMUNOLOGICALLY ACTIVE POLYPEPTIDES WITH ALTERED TOXICITY  
 USEFUL FOR THE  
 7 PREPARATION OF AN ANTIPERTUSSIS VACCINE  
 W--> 8 <130> FILE REFERENCE: 002441.00076  
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/766,560  
 C--> 10 <141> CURRENT FILING DATE: 2004-01-29  
 10 <150> PRIOR APPLICATION NUMBER: US 08/261,668  
 11 <151> PRIOR FILING DATE: 1994-06-17  
 13 <150> PRIOR APPLICATION NUMBER: US 08/012,243  
 14 <151> PRIOR FILING DATE: 1993-02-01  
 16 <150> PRIOR APPLICATION NUMBER: US 07/265,742  
 17 <151> PRIOR FILING DATE: 1988-11-01  
 19 <150> PRIOR APPLICATION NUMBER: ITALY 22481 A/87  
 20 <151> PRIOR FILING DATE: 1987-11-02  
 22 <160> NUMBER OF SEQ ID NOS: 30  
 24 <170> SOFTWARE: PatentIn version 3.1  
 26 <210> SEQ ID NO: 1  
 27 <211> LENGTH: 18  
 28 <212> TYPE: DNA  
 29 <213> ORGANISM: Artificial  
 31 <220> FEATURE:  
 32 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode an aspartic acid  
 and  
 33 glycine in place of tyrosine and arginine at amino acid residues  
 34 8 and 9, respectively  
 36 <400> SEQUENCE: 1  
 37 gtcatagccg tctacggt 18  
 40 <210> SEQ ID NO: 2  
 41 <211> LENGTH: 31  
 42 <212> TYPE: DNA  
 43 <213> ORGANISM: Bordetella pertussis  
 45 <400> SEQUENCE: 2  
 46 cgccaccgta taccgctatg actcccgccc g 31  
 49 <210> SEQ ID NO: 3  
 50 <211> LENGTH: 31  
 51 <212> TYPE: DNA  
 52 <213> ORGANISM: Bordetella pertussis  
 54 <400> SEQUENCE: 3  
 55 cgccaccgta gacggctatg actcccgccc g 31  
 58 <210> SEQ ID NO: 4  
 59 <211> LENGTH: 18  
 60 <212> TYPE: DNA

61 <213> ORGANISM: Artificial

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63 <220> FEATURE:

64 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode a glutamic acid  
and i

65       soleucine in place of a phenylalanine and threonine at amino acid

66       residues 50 and 53, respectively

68 <400> SEQUENCE: 4

69 tggagacgtc agcgctgt 18

72 <210> SEQ ID NO: 5

73 <211> LENGTH: 21

74 <212> TYPE: DNA

75 <213> ORGANISM: Bordetella pertussis

77 <400> SEQUENCE: 5

78 agcgctttcg tctccaccag c 21

81 <210> SEQ ID NO: 6

82 <211> LENGTH: 21

83 <212> TYPE: DNA

84 <213> ORGANISM: Bordetella pertussis

86 <400> SEQUENCE: 6

87 agcgctgacg tctccatcag c 21

90 <210> SEQ ID NO: 7

91 <211> LENGTH: 18

92 <212> TYPE: DNA

93 <213> ORGANISM: Artificial

95 <220> FEATURE:

96 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode a glutamic acid  
in pl

97       ace of glycine at amino acid residue 99

99 <400> SEQUENCE: 7

100 ctggcggtt cgtagaaa 18

103 <210> SEQ ID NO: 8

104 <211> LENGTH: 11

105 <212> TYPE: DNA

106 <213> ORGANISM: Bordetella pertussis

108 <400> SEQUENCE: 8

109 tacggcgccg c 11

112 <210> SEQ ID NO: 9

113 <211> LENGTH: 11

114 <212> TYPE: DNA

115 <213> ORGANISM: Bordetella pertussis

117 <400> SEQUENCE: 9

118 tacgaagccg c 11

121 <210> SEQ ID NO: 10

122 <211> LENGTH: 21

123 <212> TYPE: DNA

124 <213> ORGANISM: Artificial

126 <220> FEATURE:

127 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode a glycine in  
place of

128       aspartic acid at amino acid residue 109

130 <400> SEQUENCE: 10

131 ctggtaggtg tccagcgcg c 21

134 <210> SEQ ID NO: 11

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135 <211> LENGTH: 11
136 <212> TYPE: DNA
137 <213> ORGANISM: Bordetella pertussis
139 <400> SEQUENCE: 11
140 gtcgacactt a 11
143 <210> SEQ ID NO: 12
144 <211> LENGTH: 11
145 <212> TYPE: DNA
146 <213> ORGANISM: Bordetella pertussis
148 <400> SEQUENCE: 12
149 gtcggcactt a 11
152 <210> SEQ ID NO: 13
153 <211> LENGTH: 18
154 <212> TYPE: DNA
155 <213> ORGANISM: Artificial
157 <220> FEATURE:
158 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode a glutamic acid
in pl
159 ace of glycine at amino acid residue 121
161 <400> SEQUENCE: 13
162 gccagcgctt cggcgagg 18
165 <210> SEQ ID NO: 14
166 <211> LENGTH: 11
167 <212> TYPE: DNA
168 <213> ORGANISM: Bordetella pertussis
170 <400> SEQUENCE: 14
171 gccggcgcg c t 11
174 <210> SEQ ID NO: 15
175 <211> LENGTH: 11
176 <212> TYPE: DNA
177 <213> ORGANISM: Bordetella pertussis
179 <400> SEQUENCE: 15
180 gccgaagcgc t 11
183 <210> SEQ ID NO: 16
184 <211> LENGTH: 21
185 <212> TYPE: DNA
186 <213> ORGANISM: Artificial
188 <220> FEATURE:
189 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode an aspartic acid
in p
190 lace of alanine at amino acid residue 124
192 <400> SEQUENCE: 16
193 gccataagtg ccgacgtatt c 21
196 <210> SEQ ID NO: 17
197 <211> LENGTH: 11
198 <212> TYPE: DNA
199 <213> ORGANISM: Bordetella pertussis
201 <400> SEQUENCE: 17
202 tggccaccta c 11
205 <210> SEQ ID NO: 18
206 <211> LENGTH: 11

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Input Set : A:\PTO.FG.txt

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207 <212> TYPE: DNA  
 208 <213> ORGANISM: Bordetella pertussis  
 210 <400> SEQUENCE: 18  
 211 tggacaccta c 11  
 214 <210> SEQ ID NO: 19  
 215 <211> LENGTH: 17  
 216 <212> TYPE: DNA  
 217 <213> ORGANISM: Artificial  
 219 <220> FEATURE:  
 220 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode a glycine in  
 place of  
 221 glutamic acid at amino acid residue 129  
 223 <400> SEQUENCE: 19  
 224 gccagataacc cgctcgg 17  
 227 <210> SEQ ID NO: 20  
 228 <211> LENGTH: 11  
 229 <212> TYPE: DNA  
 230 <213> ORGANISM: Bordetella pertussis  
 232 <400> SEQUENCE: 20  
 233 agcgaatatc t 11  
 236 <210> SEQ ID NO: 21  
 237 <211> LENGTH: 11  
 238 <212> TYPE: DNA  
 239 <213> ORGANISM: Bordetella pertussis  
 241 <400> SEQUENCE: 21  
 242 agcgggtatc t 11  
 245 <210> SEQ ID NO: 22  
 246 <211> LENGTH: 18  
 247 <212> TYPE: DNA  
 248 <213> ORGANISM: Artificial  
 250 <220> FEATURE:  
 251 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode a glutamic acid  
 in pl  
 252 ace of arginine at amino acid residue 135  
 254 <400> SEQUENCE: 22  
 255 gcggaatgtc ccggtgtg 18  
 258 <210> SEQ ID NO: 23  
 259 <211> LENGTH: 11  
 260 <212> TYPE: DNA  
 261 <213> ORGANISM: Bordetella pertussis  
 263 <400> SEQUENCE: 23  
 264 gcgcattccg c 11  
 267 <210> SEQ ID NO: 24  
 268 <211> LENGTH: 11  
 269 <212> TYPE: DNA  
 270 <213> ORGANISM: Bordetella pertussis  
 272 <400> SEQUENCE: 24  
 273 ggacattccg c 11  
 276 <210> SEQ ID NO: 25  
 277 <211> LENGTH: 18  
 278 <212> TYPE: DNA

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DATE: 12/07/2004

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TIME: 16:13:17

Input Set : A:\PTO.FG.txt

Output Set: N:\CRF4\12072004\J766560.raw

279 <213> ORGANISM: Artificial

281 <220> FEATURE:

282 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode a lysine in  
place of

283       threonine at amino acid residue 159

285 <400> SEQUENCE: 25

286 tactccgttt tcgtggtc 18

289 <210> SEQ ID NO: 26

290 <211> LENGTH: 31

291 <212> TYPE: DNA

292 <213> ORGANISM: Bordetella pertussis

294 <400> SEQUENCE: 26

295 gcatcaccgg cgagaccacg accacggagt a 31

298 <210> SEQ ID NO: 27

299 <211> LENGTH: 31

300 <212> TYPE: DNA

301 <213> ORGANISM: Bordetella pertussis

303 <400> SEQUENCE: 27

304 gcatcaccgg cgagaccacg aaaacggagt a 31

307 <210> SEQ ID NO: 28

308 <211> LENGTH: 24

309 <212> TYPE: DNA

310 <213> ORGANISM: Artificial

312 <220> FEATURE:

313 <223> OTHER INFORMATION: Primer used to modify the S1 gene to encode additional amino  
acid

314       residues Asp Thr Gly Gly at position 113

316 <400> SEQUENCE: 28

317 cgccaccagt gtcgacgtat tcga 24

320 <210> SEQ ID NO: 29

321 <211> LENGTH: 21

322 <212> TYPE: DNA

323 <213> ORGANISM: Bordetella pertussis

325 <400> SEQUENCE: 29

326 gtcgacactt atggcgacaa t 21

329 <210> SEQ ID NO: 30

330 <211> LENGTH: 33

331 <212> TYPE: DNA

332 <213> ORGANISM: Bordetella pertussis

334 <400> SEQUENCE: 30

335 gtcgacactg gtggcgacac tgggtggcgac aat 33

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/766,560

DATE: 12/07/2004  
TIME: 16:13:18

Input Set : A:\PTO.FG.txt  
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Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 6

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,4,7,10,13,16,19,22,25,28



**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/766,560

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Input Set : A:\PTO.FG.txt

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L:8 M:283 W: Missing Blank Line separator, <130> field identifier

L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date